

# **EXHIBIT 1**

## CURRICULUM VITAE

Name: Richard Kroczek, M.D.  
Occupation: Professor, Molecular Immunology  
Robert Koch-Institute  
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Personal Information: born November 3, 1952 in Orlau  
Nationality: German

### **Education and Training:**

1964 - 1973 Attending the Hans-Leinberger-Gymnasium in Landshut, Germany; graduated first in the class of 1973

1973 - 1976 Pre-clinical studies at the University of Kiel

1976 - 1977 Medical School, University of Bonn

1977 - 1978 Westminster Hospital Medical School, London, supported by a grant from the Deutscher Akademischer Austauschdienst

1978 - 1981 Continuation of clinical studies at the University of Bonn

1981 Final Medical Exam ("Staatsexamen"); Doctoral thesis; Medical License

1981 - 1983 Residency in Pediatrics at the Munich University Children's Hospital

1983 American Medical Exam (VQE)

1984 - 1986 Postdoctoral Fellow in Immunology with Dr. Ethan Shevach in the Laboratory of Allergy and Infectious Diseases, NIH, USA. Supported by a grant from the Deutsche Forschungsgemeinschaft. Research topics: Role of Thy-1 in T-cell activation, action of cyclosporin A

1986 Research fellow of the Fogarty Foundation

1986 - 1987

Postdoctoral fellow at the Max-Planck-Institute for Immunobiology in Freiburg

**Employment:**

1987 - 1992

Head of a research group at the Max-Planck-Society Research Unit for Immunology in Erlangen, Germany

1990

Habilitation at the University of Erlangen; faculty member of the university

1997

Professor, University of Erlangen

1993 -

Head, Molecular Immunology, Robert Koch-Institute, Berlin

1999

Offered chair in immunology at the Free University of Berlin (not accepted)

**Current research:**

Molecular mechanisms of early T cell activation, T cell/B cell cooperation, T cell/monocyte cooperation, T cell/dendritic cell cooperation, focus on the function of CD40 Ligand, ATAC and ICOS molecules in vitro and in vivo

**Professional and scientific activities:**

Member of the German Society for Immunology.

Reviewer for various scientific journals (European Journal of Immunology, Journal of Immunology, European Journal of Biochemistry, Blood, Journal of Clinical Investigation, Nature Medicine).

Reviewer for various scientific societies and funding agencies.

**Honors:**

Science prize of the SmithKline Beecham Foundation 1999.

## PUBLICATIONS

1. Kroczek RA, Däumling S, Belohradsky BH.  
Kawasaki-Syndrom. 4 Todesfälle in der Bundesrepublik.  
Diagnose, Therapie und Prognose der kardialen  
Komplikationen.  
Pädiatrische Praxis 28 (1983) 491-495
2. Mezger J, Kroczek RA, Belohradsky BH, Remberger K.  
Das Kawasaki-Syndrom.  
Medizinische Welt 34 (1983) 1085-1090
3. Kroczek RA.  
Congenital chyloperitoneum: Direct comparison of medium-  
chain triglyceride treatment with total parenteral  
nutrition.  
European Journal of Pediatrics 144 (1985) 77-79
4. Kroczek RA, Mühlbauer W, Zimmermann S.  
Cloverleaf skull associated with Pfeiffer-syndrome:  
pathology  
and management.  
European Journal of Pediatrics 145 (1986) 442-445
5. Gunter KC, Kroczek RA, Shevach EM, Germain RN.  
Functional expression of the murine Thy-1.2 gene in  
transfected human T cells.  
Journal of Experimental Medicine 163 (1986) 285-300
6. Kroczek RA, Gunter KC, Seligmann B, Shevach EM.  
Induction of T cell activation by monoclonal anti-Thy-1  
antibodies.  
Journal of Immunology 136 (1986) 4379-4384
7. Kroczek RA, Gunter KC, Germain RN, Shevach EM.  
Thy-1 functions as a signal transduction molecule in  
T-lymphocytes and transfected B-lymphocytes.  
Nature 322 (1986) 181-184
8. Malek TR, Ortega G, Chan C, Kroczek RA, Shevach EM.  
Role of Ly-6 in lymphocyte activation. II. Induction of  
T cell activation by monoclonal anti-Ly-6 antibodies.  
Journal of Experimental Medicine 164 (1986) 709-722
9. Gunter KC, Germain RN, Kroczek RA, Saito T, Yokoyama WM,  
Chan C, Weiss A, Shevach EM.  
Thy-1-mediated T-cell activation requires co-expression of  
CD3/Ti complex.  
Nature 326 (1987) 505-507
10. Kroczek RA, Black CDV, Barbet J, Edison LJ, Shevach EM.  
Induction of IL-2 receptor expression in vivo: Response to  
allogeneic cells.  
Transplantation 44 (1987) 547-553

11. Kroczek RA, Black CDV, Barbet J, Shevach EM.  
Mechanism of action of Cyclosporin A in vivo. Cyclosporin A fails to inhibit T lymphocyte activation in response to alloantigens.  
Journal of Immunology 139 (1987) 3597-3603
12. Black CDV, Kroczek RA, Barbet J, Weinstein J, Shevach EM.  
Induction of IL-2 receptor expression in vivo: Response to Concanavalin A.  
Cellular Immunology 111 (1988) 420-432
13. Kroczek RA.  
Immediate visualization of blotted RNA in Northern analysis.  
Nucleic Acids Research 17 (1989) 9497
14. Kroczek RA, Siebert E.  
Optimization of Northern analysis by vacuum-blotting, RNA-transfer visualization and UV-fixation.  
Analytical Biochemistry 184 (1990) 90-95
15. Potocnik AJ, Kinne R, Menninger H, Zacher J, Emmrich F, Kroczek RA.  
Expression of activation antigens on T cells in rheumatoid arthritis patients.  
Scandinavian Journal of Immunology 31 (1990) 213-224
16. Potocnik AJ, Menninger H, Yang SY, Pirner K, Krause, A, Burmester GR, Bröker BM, Hept P, Weseloh G, Michels H, Truckenbrodt H, Emmrich F, Kroczek RA.  
Expression of the CD2 activation epitope T11-3 (CD2R) on T-cells in rheumatoid arthritis, juvenile rheumatoid arthritis, systemic lupus erythematosus, ankylosing spondylitis, and lyme disease: phenotypic and functional analysis.  
Scandinavian Journal of Immunology 34 (1991) 351-358
17. Korthäuer U, Hennerkes B, Menninger H, Mages HW, Zacher J, Potocnik AJ, Kroczek RA.  
Oligoclonal T-cells in rheumatoid arthritis: identification strategy and molecular characterization of a clonal T-cell receptor.  
Scandinavian Journal of Immunology 36 (1992) 855-863
18. Graf D, Korthäuer U, Mages HW, Senger G, Kroczek RA.  
Cloning of TRAP, a ligand for CD40 on human T cells.  
European Journal of Immunology 22 (1992) 3191-3194
19. Mages HW, Stamminger T, Rilke O, Bravo R, Kroczek RA.  
Expression of PILOT, a putative transcription factor, requires in T-cells two signals and is cyclosporin A sensitive.  
International Immunology 5 (1993) 63-67

20. Korthäuer U, Graf D, Mages HW, Brière F, Padayachee M, Malcolm S, Ugazio AG, Notarangelo LD, Levinsky RJ, Kroczeck RA.  
Defective expression of T-cell CD40 ligand causes X-linked immunodeficiency with hyper-IgM.  
Nature 361 (1993) 539-541

21. Bröker BM, Korthäuer U, Heppt P, Weseloh G, de la Camp R, Kroczeck RA, Emmrich F.  
Biased T cell receptor V gene usage in rheumatoid arthritis. Oligoclonal expansion of T cells expressing V $\beta$  2 genes in synovial fluid but not in peripheral blood.  
Arthritis and Rheumatism 36 (1993) 1234-1243

22. Zimmermann S, Becker-Perez I, Beuscher HU, Kroczeck RA, Roellinghoff M, Solbach W.  
Leishmania major parasites share an epitope with the murine CD3-T cell receptor complex.  
European Journal of Immunology 24 (1994) 503-507

23. Villa A, Notarangelo LD, DiSanto JP, Macchi PP, Strina D, Frattini A, Lucchini F, Patrosso CM, Giliani S, Mantuano E, Agosti S, Nocera G, Kroczeck RA, Fischer A, Ugazio AG, de Saint Basile G, Vezzoni P.  
Organization of the human CD40L gene - implications for molecular defects in X-chromosome-linked hyper-IgM syndrome and prenatal diagnosis.  
Proceedings of the National Academy of Sciences 91 (1994) 2110-2114

24. Brugnoni D, Airo P, Graf D, Marconi M, Lebowitz M, Plebani A, Giliani S, Malacarne F, Cattaneo R, Ugazio AG, Albertini A, Kroczeck RA, Notarangelo LD.  
Ineffective expression of CD40 ligand on cord blood T cells may contribute to poor immunoglobulin production in the newborn.  
European Journal of Immunology 24 (1994) 1919-1924

25. Callard RE, Smith SH, Herbert J, Morgan G, Padayachee M, Lederman S, Chess L, Kroczeck RA, Fanslow WC, Armitage RJ.  
CD40 ligand (CD40L) expression and B cell function in agammaglobulinemia with normal or elevated levels of IgM (HIM). Comparison of X-linked, autosomal recessive and non-X linked forms of the disease, and obligate carriers.  
Journal of Immunology 153 (1994) 3295-3306

26. Mages HW, Rilke O, Bravo R, Senger G, Kroczeck RA.  
NOT, a human immediate-early response gene closely related to the steroid/thyroid hormone receptor NAK1/TR3.  
Molecular Endocrinology 8 (1994) 1583-1591

27. Durandy A, de Saint Basile G, Lisowska-Grosbierre B, Gauchat JF, Forveille M, Kroczeck RA, Bonnefoy JY, Fischer A.  
Undetectable CD40 ligand expression on T cells and low B cell responses to CD40 binding agonists in human newborns.  
Journal of Immunology 154 (1995) 1560-1568

28. Kinne RW, Boehm S, Iftner T, Aigner T, Vornehm S, Weseloh G, Bravo R, Emmrich F, Kroczeck RA.  
Synovial fibroblast-like cells strongly express Jun-B and C-Fos proto-oncogenes in rheumatoid- and osteoarthritis.  
Scandinavian Journal of Rheumatology S 101 (1995) 121-125

29. Müller S, Dorner B, Korthäuer U, Mages HW, D'Apuzzo M, Senger G, Kroczeck RA.  
Cloning of ATAC, an activation-induced, chemokine-related molecule exclusively expressed in CD8<sup>+</sup> T lymphocytes.  
European Journal of Immunology 25 (1995) 1744-1748

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A soluble form of TRAP (CD40 ligand) is rapidly released after T cell activation.  
European Journal of Immunology 25 (1995) 1749-1754

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Spontaneous apoptosis of dendritic cells is efficiently inhibited by TRAP (CD40-ligand) and TNF- $\alpha$ , but strongly enhanced by interleukin-10.  
European Journal of Immunology 25 (1995) 1943-1950

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Journal of Immunology 156 (1996) 3737-3746

33. Brugnoni D, Airo P, Graf D, Marconi M, Molinari C, Braga D, Malacarne F, Soresina A, Ugazio AG, Cattaneo R, Kroczeck RA, Notarangelo LD.  
Ontogeny of CD40 ligand expression by activated peripheral blood lymphocytes in humans.  
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Journal of Immunology 157 (1996) 441-448

35. Feske S, Müller JM, Graf D, Kroczek RA, Dräger R, Niemeyer C, Baeuerle PA, Peter HH, Schlesier M. Severe combined immunodeficiency due to defective binding of the nuclear factor of activated T cells in T lymphocytes of two male siblings. European Journal of Immunology 26 (1996) 2119-2126

36. Ludewig B, Henn V, Schröder, J.M., Graf D, Kroczek RA. Induction, regulation, and function of soluble TRAP (CD40 ligand) during interaction of primary CD4<sup>+</sup>CD45RA<sup>+</sup> T cells with dendritic cells. European Journal of Immunology 26 (1996) 3137-3143

38. Schultz A, Greiner A, Nenninger R, Schoemig D, Wilisch A, Oswald E, Kroczek RA, Schalke B, Mueller-Hermelink HK, Marx A. CD40 als Vermittler von Proliferation in normalem und neoplastischem Thymusepithel. Verhandlungen der Deutschen Gesellschaft für Pathologie 80 (1996) 250-255

39. Dorner B, Müller S, Entschladen F, Schröder JM, Franke P, Kraft R, Friedl P, Clark-Lewis I, Kroczek RA. Purification, structural analysis and function of natural ATAC, a cytokine expressed in CD8<sup>+</sup> T cells. Journal of Biological Chemistry, 272 (1997) 8817-8823

40. Hermes B, Worm M, Nowak F, Kroczek RA, Stein H, Henz BM. Upregulation of CD40 and CD40-ligand expression in IgE-associated cutaneous diseases. Acta Dermatologica Venereologica 77 (1997) 441-445

41. Henn V, Slupsky JR, Gräfe M, Anagnostopoulos I, Förster R, Müller-Berghaus G, Kroczek RA. CD40 ligand on activated platelets triggers an inflammatory reaction of endothelial cells. Nature 391 (1998) 591-594

42. Slupsky JR, Kalbas M, Willuweit A, Henn V, Kroczek RA, Müller-Berghaus G. Activated platelets induce tissue factor expression on human umbilical vein endothelial cells by ligation of CD40. Thrombosis and Haemostasis 80 (1998) 1008-1014

43. Mages HW, Baag R, Steiner B, Kroczek RA. Utilization of an NF-ATp binding promoter element for EGR3 expression in T cells but not fibroblasts provides a molecular model for the lymphoid cell-specific effect of Cyclosporin A. Molecular and Cellular Biology 18 (1998) 7157-7165

44. Greiner A, Knoerr C, Qin Y, Schultz A, Marx A, Kroczeck RA, Mueller-Hermelink HK  
CD40 ligand and autoantigen are involved in the pathogenesis of low-grade B-cell lymphomas of mucosa-associated lymphoid tissue.  
Developmental Immunology, 6 (1998) 187-195

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Molecular cloning and characterization of murine ICOS and identification of B7h as ICOS ligand.  
European Journal of Immunology 30 (2000) 1040-1047

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Immunity 12 (2000) 293-300

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European Journal of Immunology 30 (2000) 2864-2870

49. Beier KC, Hutloff A, Dittrich AM, Heuck C, Rauch A, Büchner K, Ludewig B, Ochs HD, Mages HW, Kroczeck RA.  
Induction, binding specificity and function of human ICOS  
European Journal of Immunology 30 (2000) 3707-3717

50. Ebner S, Ratzinger G, Krösbacher B, Schmuth M, Weiss A, Reider D, Kroczeck RA, Herold M, Heufler C, Fritsch P, Romani N.  
Production of IL-12 by human monocyte-derived dendritic cells is optimal when the stimulus is given at the onset of maturation, and is further enhanced by IL-4.  
Journal of Immunology 166 (2001) 633-641

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The inflammatory action of CD40 ligand (CD154) expressed on activated human platelets is temporarily limited by co-expressed CD40.  
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Lora J, Al-garawi A, Kroczek R, Gutierrez-Ramos JC, Coyle AJ.  
ICOS is critical for T helper cell-mediated lung mucosal  
inflammatory responses.  
Nature Immunology 2 (2001) 597-604